

CIRCUITRY FOR LINEAR CONTROL OF HEAD FLYING HEIGHT USING THERMAL MEANS

ABSTRACT OF THE DISCLOSURE

The spacing decrease between pole tips of a write element and a magnetic medium that is associated with the write element is linearly proportional to an input signal, such as an input voltage or current, to a slider flying height controller for a hard disk drive. The flying height controller includes a heater current controller and a multiplexer. The heater current controller receives the input signal and outputs a control current proportional to the input signal. The multiplexer couples the control current to a heating element associated with the write element on a selected slider body during a read operation. The heating element dissipates a power that is proportional to the control current and causes a decrease in the spacing between the pole tips of the write element and the magnetic medium that is linearly proportional to the control current and to the input signal.